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EXAMINER	
KLINGER, SCOTT M	

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/903,755	BORDER, JOHN	
	Examiner	Art Unit	
	Scott M. Klinger	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/31/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-30 are pending.

Priority

A claim for priority from provisional application 60/220,026 has been made. The effective filing date for subject matter in the application is 21 July 2000.

Claim Objections

It is suggested that the phrase "a common header field the stores information" (emphasis added) in claim 5 on page 60, be changed to "a common header field that stores information" (emphasis added).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, 7, 8, 10, 12, 14, 15, 17, 19, 21, 22, 24, 26, 28, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Green et al. (U.S. Patent Number 6,003,084, hereinafter "Green"). Green discloses a secure network proxy for connecting entities. Green shows,

In referring to claim 1,

- A plurality of communication interfaces configured to receive and to forward messages according to a prescribed protocol:

  Green, Fig. **3b** shows a communication interface between a client and the network apparatus and a communication interface between a server and the network apparatus. Green, Fig. **4** shows the protocol used is TCP/IP
- A plurality of modules configured to process the messages to effect performance enhancing functions:

  "In FIG. 3b, representations of modules or components of the proxy are shown. A client transfers transport data or PDUs to a TCP stack in the program. The stack passes data on to the relay, which in turn passes it on to a connection manager." (Green, col. 8, lines 15-19)
- A plurality of buffers configured to store the received messages and messages that are generated by one of the plurality of modules:

  Green, Fig. **3b** shows stacks that store received messages and messages that are generated by one of the plurality of modules
- A portion of the plurality of buffers is shared by the plurality of modules based upon execution of a particular one of the performance enhancing functions,

  Green, Fig. **3b** shows a portion of the plurality of buffers is shared by the plurality of modules, said modules store PDUs generated by the modules, and said modules generate PDUs bases upon execution of a particular one of the performance enhancing functions, such as security
- Each of the plurality of buffers has a data structure that includes an expandable header to accommodate different message types:

  A stack that sends and receives TCP/IP packets inherently implies an expandable header to accommodate different message types

In referring to claim 3,

- The communication interface includes a local area network (LAN) interface, and a wide area network (WAN) interface:

  The system of Green is a firewall system, the background of Green discusses various uses of firewalls including connecting a LAN to a WAN: *"Firewalls are devices, such as programs or separate computer systems which were introduced in order to address the security problems associated with connecting a once private network such as a local area network connecting computers in an office, to an "Internet", where the data transmissions are open to eavesdropping, and the potential exists for "hostile" outsiders to disrupt network service or tamper with or attack systems residing on the private network."* (Green, col. 1, lines 19-26)
- One of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction:

  Green, Fig. **3b** shows one of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction
- Another one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction:

  Green, Fig. **3b** shows one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction

In referring to claim 5,

- A specific header field that stores platform specific information:

  A system that uses the TCP/IP protocol suite inherently implies a version field, which stores platform specific information
- A common header field that stores information known to the plurality of modules:

  All of the fields can be read by the modules and are therefore known to the plurality of modules
- A payload field:

  A system that uses the TCP/IP protocol suite inherently implies a payload field

- An offset field that indicates start of the payload field:
  A system that uses the TCP/IP protocol suite inherently implies an offset field
- A header growth field that provides a variable header length:
  A system that uses the TCP/IP protocol suite inherently implies a header length field

In referring to claim 7,

- The prescribed protocol is the Transmission Control Protocol (TCP):
  Green, Fig. **4** shows the protocol used is TCP

In referring to claim 8,

- Receiving messages according to a prescribed protocol:
  Green, Fig. **3b** shows a communication interface between a client and the network apparatus and a communication interface between a server and the network apparatus.
  Green, Fig. **4** shows the protocol used is TCP/IP
- Processing the messages to effect performance enhancing functions via a plurality of modules:
  Green, col. 8, lines 15-19 (see full quote above)
- Storing the received messages and messages that are generated by one of the plurality of modules in a plurality of buffers:
  Green, Fig. **3b** shows stacks that buffer/store received messages and messages that are generated by one of the plurality of modules
- A portion of the plurality of buffers is shared by the plurality of modules based upon execution of a particular one of the performance enhancing functions:
  Green, Fig. **3b** shows a portion of the plurality of buffers is shared by the plurality of modules, said modules store PDUs generated by the modules, and said modules generate PDUs bases upon execution of a particular one of the performance enhancing functions, such as security
- Each of the plurality of buffers has a data structure that includes an expandable header to accommodate different message types:

A stack that sends and receives TCP/IP packets inherently implies an expandable header to accommodate different message types

In referring to claim 10,

- A local area network (LAN) interface and a wide area network (WAN) interface:
  The system of Green is a firewall system, the background of Green discusses various uses of firewalls including connecting a LAN to a WAN: *Green, col. 1, lines 19-26* (see full quote above)
- one of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction:
  Green, Fig. **3b** shows one of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction
- Another one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction:
  Green, Fig. **3b** shows one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction

In referring to claim 12,

- A specific header field that stores platform specific information:
  A system that uses the TCP/IP protocol suite inherently implies a version field, which stores platform specific information
- A common header field that stores information known to the plurality of modules:
  All of the fields can be read by the modules and are therefore known to the plurality of modules
- A payload field:
  A system that uses the TCP/IP protocol suite inherently implies a payload field
- An offset field that indicates start of the payload field:
  A system that uses the TCP/IP protocol suite inherently implies an offset field
- A header growth field that provides a variable header length:

A system that uses the TCP/IP protocol suite inherently implies a header length field

In referring to claim 14,

- The prescribed protocol in the receiving step is the Transmission Control Protocol (TCP):
  Green, Fig. **4** shows the protocol used is TCP

In referring to claim 15,

- Means for receiving messages according to a prescribed protocol:
  Green, Fig. **3b** shows a communication interface between a client and the network apparatus and a communication interface between a server and the network apparatus.
  Green, Fig. **4** shows the protocol used is TCP/IP
- Means for processing the messages to effect performance enhancing functions:
  Green, col. 8, lines 15-19 (see full quote above)
- The received messages and messages that are generated by processing means are stored in a plurality of buffers:
  Green, Fig. **3b** shows stacks that buffer/store received messages and messages that are generated by one of the plurality of modules
- A portion of the plurality of buffers being shared by the processing means based upon execution of a particular one of the performance enhancing functions:
  Green, Fig. **3b** shows a portion of the plurality of buffers is shared by the plurality of modules, said modules store PDUs generated by the modules, and said modules generate PDUs bases upon execution of a particular one of the performance enhancing functions, such as security
- Each of the plurality of buffers having a data structure that includes an expandable header to accommodate different message types:
  A stack that sends and receives TCP/IP packets inherently implies an expandable header to accommodate different message types

In referring to claim 17,

- The receiving means includes at least one of a local area network (LAN) interface and a wide area network (WAN) interface:
  The system of Green is a firewall system, the background of Green discusses various uses of firewalls including connecting a LAN to a WAN: *Green, col. 1, lines 19-26* (see full quote above)
- One of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction:
  Green, Fig. **3b** shows one of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction
- Another one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction:
  Green, Fig. **3b** shows one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction

In referring to claim 19,

- A specific header field that stores platform specific information:
  A system that uses the TCP/IP protocol suite inherently implies a version field, which stores platform specific information
- A common header field that stores information known to the plurality of modules:
  All of the fields can be read by the modules and are therefore known to the plurality of modules
- A payload field:
  A system that uses the TCP/IP protocol suite inherently implies a payload field
- An offset field that indicates start of the payload field:
  A system that uses the TCP/IP protocol suite inherently implies an offset field
- A header growth field that provides a variable header length:
  A system that uses the TCP/IP protocol suite inherently implies a header length field

In referring to claim 21,

- The prescribed protocol is the Transmission Control Protocol (TCP):
  Green, Fig. **4** shows the protocol used is TCP

In referring to claim 22,

- Receiving messages according to a prescribed protocol:
  Green, Fig. **3b** shows a communication interface between a client and the network apparatus and a communication interface between a server and the network apparatus.
  Green, Fig. **4** shows the protocol used is TCP/IP
- Processing the messages to effect performance enhancing functions via a plurality of modules:
  Green, col. 8, lines 15-19 (see full quote above)
- Storing the received messages and messages that are generated by one of the plurality of modules in a plurality of buffers:
  Green, Fig. **3b** shows stacks that buffer/store received messages and messages that are generated by one of the plurality of modules
- A portion of the plurality of buffers is shared by the plurality of modules based upon execution of a particular one of the performance enhancing functions:
  Green, Fig. **3b** shows a portion of the plurality of buffers is shared by the plurality of modules, said modules store PDUs generated by the modules, and said modules generate PDUs bases upon execution of a particular one of the performance enhancing functions, such as security
- Each of the plurality of buffers has a data structure that includes an expandable header to accommodate different message types:
  A stack that sends and receives TCP/IP packets inherently implies an expandable header to accommodate different message types

In referring to claim 24,

- The receiving step is performed by a communication interface that includes at least one of a local area network (LAN) interface and a wide area network (WAN) interface:
  The system of Green is a firewall system, the background of Green discusses various uses of firewalls including connecting a LAN to a WAN: *Green, col. 1, lines 19-26* (see full quote above)
- One of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction:
  Green, Fig. **3b** shows one of the plurality of buffers being designated as a LAN-to-WAN buffer that stores the receive messages in a LAN-to-WAN direction
- Another one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction:
  Green, Fig. **3b** shows one of the plurality of buffers being designated as a WAN-to-LAN buffer that stores the receive messages in a WAN-to-LAN direction

In referring to claim 26,

- A specific header field that stores platform specific information:
  A system that uses the TCP/IP protocol suite inherently implies a version field, which stores platform specific information
- A common header field that stores information known to the plurality of modules:
  All of the fields can be read by the modules and are therefore known to the plurality of modules
- A payload field:
  A system that uses the TCP/IP protocol suite inherently implies a payload field
- An offset field that indicates start of the payload field:
  A system that uses the TCP/IP protocol suite inherently implies an offset field
- A header growth field that provides a variable header length:
  A system that uses the TCP/IP protocol suite inherently implies a header length field

In referring to claim 28,

- The prescribed protocol in the receiving step is the Transmission Control Protocol (TCP): Green, Fig. 4 shows the protocol used is TCP

In referring to claim 29,

- A specific header field that stores platform specific information:
  A system that uses the TCP/IP protocol suite inherently implies a version field, which stores platform specific information
- A common header field that stores information known to the plurality of modules:
  All of the fields can be read by the modules and are therefore known to the plurality of modules
- A payload field:
  A system that uses the TCP/IP protocol suite inherently implies a payload field
- An offset field that indicates start of the payload field:
  A system that uses the TCP/IP protocol suite inherently implies an offset field
- A header growth field that provides a variable header length:
  A system that uses the TCP/IP protocol suite inherently implies a header length field

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 9, 16, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Chiles et al. (U.S. Patent Number 6,618,393, hereinafter "Chiles") and in further view of Rao (U.S. Patent Number 6,789,118, hereinafter "Rao").

In referring to claim 2, although Green shows substantial features of the claimed invention, including the system of claim 1 (see 102 rejection above), Green does not show a spoofing module configured to perform selective spoofing. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green as evidenced by Chiles.

In analogous art, Chiles discloses a method and apparatus for transparent support of network protocols with header translation. Chiles shows a spoofing module: *In a representative preferred embodiment, a communications software structure in accordance with the invention, referred to herein as a spoofing module, essentially "spoofs" the host system and provides that support for it. The support is provided by an emulation of the negotiation of the first network protocol and providing the translation of packet headers from the first protocol to the other. This spoofing module consists of two separate functions or modules, one module for protocol negotiation and the other for packet header translation."* (Chiles, col. 3, lines 3-12)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green so as to provide a spoofing module configured to perform selective spoofing, such as taught by Chiles, in order to allow a client to communicate over a network that uses a different protocol.

Although Green in view of Chiles shows substantial features of the claimed invention, Green in view of Chiles does not show a connection module configured to multiplex a plurality of connections over a common backbone connection. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green in view of Chiles as evidenced by Rao.

In analogous art, Rao discloses a multi-service network switch with policy based routing. Rao shows:

- A connection module configured to multiplex a plurality of connections over a common backbone connection:

  "The switch preferably includes a redundant bus architecture for interconnecting the FMs 10 and the SCMs 14. This bus architecture preferably provides two (right and left) management busses 16, two (right and left) time-division multiplexed (TDM) busses 18,

and two (right and left) cell/ATM busses 20, on the switch's backplane." (Rao, col. 4, line 64 – col. 5, line 2)

- A prioritization module configured to prioritize access to the backbone connection:
  "QoS is a method of classifying users to determine the priority with which packets are conveyed once a call has been accepted. QoS offers preferential treatment by processing connections based on their QoS levels." (Rao, col. 9, lines 16-19)
- A path selection module configured to determine a path among a plurality of paths to transmit the received messages:
  "According to one embodiment of the invention, the switch supports dial network wholesaling by allowing policy-based routing. The switch allows the selection of a routing path for a particular connection based on call policies associated with the call." (Rao, col. 2, lines 15-19)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green in view of Chiles so as to provide a connection module configured to multiplex a plurality of connections over a common backbone connection, such as taught by Rao, in order to provide multiple network services from a single platform.

In referring to claim 9, although Green shows substantial features of the claimed invention, including the system of claim 8 (see 102 rejection above), Green does not show a spoofing module configured to perform selective spoofing. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green as evidenced by Chiles.

In analogous art, Chiles discloses a method and apparatus for transparent support of network protocols with header translation. Chiles shows a spoofing module: *Chiles, col. 3, lines 3-12* (see full quote above).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green so as to provide a spoofing module

configured to perform selective spoofing, such as taught by Chiles, in order to allow a client to communicate over a network that uses a different protocol.

Although Green in view of Chiles shows substantial features of the claimed invention, Green in view of Chiles does not show a connection module configured to multiplex a plurality of connections over a common backbone connection. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green in view of Chiles as evidenced by Rao.

In analogous art, Rao discloses a multi-service network switch with policy based routing. Rao shows:

- A connection module configured to multiplex a plurality of connections over a common backbone connection:
  Rao, col. 4, line 64 – col. 5, line 2 (see full quote above)
- A prioritization module configured to prioritize access to the backbone connection:
  Rao, col. 9, lines 16-19 (see full quote above)
- A path selection module configured to determine a path among a plurality of paths to transmit the received messages:
  Rao, col. 2, lines 15-19 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green in view of Chiles so as to provide a connection module configured to multiplex a plurality of connections over a common backbone connection, such as taught by Rao, in order to provide multiple network services from a single platform.

In referring to claim 16, although Green shows substantial features of the claimed invention, including the system of claim 15 (see 102 rejection above), Green does not show a spoofing module configured to perform selective spoofing. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green as evidenced by Chiles.

In analogous art, Chiles discloses a method and apparatus for transparent support of network

protocols with header translation. Chiles shows a spoofing module: *Chiles, col. 3, lines 3-12* (see full quote above).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green so as to provide a spoofing module configured to perform selective spoofing, such as taught by Chiles, in order to allow a client to communicate over a network that uses a different protocol.

Although Green in view of Chiles shows substantial features of the claimed invention, Green in view of Chiles does not show a connection module configured to multiplex a plurality of connections over a common backbone connection. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green in view of Chiles as evidenced by Rao.

In analogous art, Rao discloses a multi-service network switch with policy based routing. Rao shows:

- A connection module configured to multiplex a plurality of connections over a common backbone connection:
  Rao, col. 4, line 64 – col. 5, line 2 (see full quote above)
- A prioritization module configured to prioritize access to the backbone connection:
  Rao, col. 9, lines 16-19 (see full quote above)
- A path selection module configured to determine a path among a plurality of paths to transmit the received messages:
  Rao, col. 2, lines 15-19 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green in view of Chiles so as to provide a connection module configured to multiplex a plurality of connections over a common backbone connection, such as taught by Rao, in order to provide multiple network services from a single platform.

In referring to claim 23, although Green shows substantial features of the claimed invention, including the system of claim 22 (see 102 rejection above), Green does not show a spoofing

module configured to perform selective spoofing. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green as evidenced by Chiles.

In analogous art, Chiles discloses a method and apparatus for transparent support of network protocols with header translation. Chiles shows a spoofing module: *Chiles, col. 3, lines 3-12* (see full quote above).

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green so as to provide a spoofing module configured to perform selective spoofing, such as taught by Chiles, in order to allow a client to communicate over a network that uses a different protocol.

Although Green in view of Chiles shows substantial features of the claimed invention, Green in view of Chiles does not show a connection module configured to multiplex a plurality of connections over a common backbone connection. Nonetheless this feature is well known in the art and would have been an obvious addition to the system disclosed by Green in view of Chiles as evidenced by Rao.

In analogous art, Rao discloses a multi-service network switch with policy based routing. Rao shows:

- A connection module configured to multiplex a plurality of connections over a common backbone connection:
  Rao, col. 4, line 64 – col. 5, line 2 (see full quote above)
- A prioritization module configured to prioritize access to the backbone connection:
  Rao, col. 9, lines 16-19 (see full quote above)
- A path selection module configured to determine a path among a plurality of paths to transmit the received messages:
  Rao, col. 2, lines 15-19 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of altering the system of Green in view of Chiles so as to provide a connection module configured to multiplex a plurality of connections over a common

backbone connection, such as taught by Rao, in order to provide multiple network services from a single platform.

Claims 4, 11, 18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Humphrey et al. (U.S. Patent Number 6,434,609, hereinafter "Humphrey").

In referring to claim 4, although Green shows substantial features of the claimed invention, including the system of claim 3 (see 102 rejection above), Green does not show the WAN is satellite network. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Green as evidenced by Humphrey.

In analogous art, Humphrey discloses a comprehensive global information network broadcasting system and methods of distributing information. Humphrey shows a WAN that is a satellite network: *"The use of satellite communications to provide a broadcast medium to the Internet may be accomplished by orbital satellites which allow a single signal to be sent up to a satellite and the resulting signal to be sent down to large geographic areas."* (Humphrey, col. 4, lines 45-49)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a satellite network, such as taught by Humphrey, in order to provide network access to remote and non-permanent locations.

In referring to claim 11, although Green shows substantial features of the claimed invention, including the system of claim 10 (see 102 rejection above), Green does not show the WAN is satellite network. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Green as evidenced by Humphrey.

In analogous art, Humphrey discloses a comprehensive global information network broadcasting system and methods of distributing information. Humphrey shows a WAN that is a satellite network: *Humphrey, col. 4, lines 45-49* (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a satellite network, such as taught by Humphrey, in order to provide network access to remote and non-permanent locations.

In referring to claim 18, although Green shows substantial features of the claimed invention, including the system of claim 17 (see 102 rejection above), Green does not show the WAN is satellite network. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Green as evidenced by Humphrey.

In analogous art, Humphrey discloses a comprehensive global information network broadcasting system and methods of distributing information. Humphrey shows a WAN that is a satellite network: *Humphrey, col. 4, lines 45-49* (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a satellite network, such as taught by Humphrey, in order to provide network access to remote and non-permanent locations.

In referring to claim 25, although Green shows substantial features of the claimed invention, including the system of claim 22 (see 102 rejection above), Green does not show the WAN is satellite network. Nonetheless this feature is well known in the art and would have been an obvious implementation of the system disclosed by Green as evidenced by Humphrey.

In analogous art, Humphrey discloses a comprehensive global information network broadcasting system and methods of distributing information. Humphrey shows a WAN that is a satellite network: *Humphrey, col. 4, lines 45-49* (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a satellite network, such as taught by Humphrey, in order to provide network access to remote and non-permanent locations.

Claims 6, 13, 20, 27, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green in view of Wells et al. (RFC 1795: *Data Link Switching: Switch-to-Switch Protocol*, hereinafter "Wells").

In referring to claim 6, although Green shows substantial features of the claimed invention, including the system of claim 5 (see 102 rejection above), Green does not show a flag field, connection handle field, and an owner specified field. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Green as evidenced by Wells.

In analogous art, Wells discloses data link switching over TCP/IP. Wells shows:

- A flag field that specifies direction of message flow:
  "The Frame Direction field (offset 38) is set to 0x01 for frames sent from the origin DLSw to the target DLSw, and is set to 0x02 for frames sent from the target DLSw to the origin DLSw." (Wells, page 10)
- A connection handle field that specifies handle of a backbone connection; and
  "A data link is defined as a logical association between the two end stations using Data Link Switching. It is identified by a Data Link ID (14 bytes) consisting of the pair of attachment addresses associated with each end system." (Wells, page 11)
- An owner specific field that stores an owner specific header:
  "An example of using all User Definable SAPs of 0x04 to 0xEC for SNA Data Link Switching and SAP 0xF0 for NetBIOS Data Link Switching would be as follows:" (Wells, page 70)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a flag field, connection handle field, and an owner specified field, such as taught by Wells, in order to provide data link switching over the TCP/IP network.

In referring to claim 13, although Green shows substantial features of the claimed invention, including the system of claim 12 (see 102 rejection above), Green does not show a flag field,

connection handle field, and an owner specified field. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Green as evidenced by Wells.

In analogous art, Wells discloses data link switching over TCP/IP. Wells shows:

- A flag field that specifies direction of message flow:
  Wells, page 10 (see full quote above)
- A connection handle field that specifies handle of a backbone connection; and
  Wells, page 11 (see full quote above)
- An owner specific field that stores an owner specific header:
  Wells, page 70 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a flag field, connection handle field, and an owner specified field, such as taught by Wells, in order to provide data link switching over the TCP/IP network.

In referring to claim 20, although Green shows substantial features of the claimed invention, including the system of claim 19 (see 102 rejection above), Green does not show a flag field, connection handle field, and an owner specified field. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Green as evidenced by Wells.

In analogous art, Wells discloses data link switching over TCP/IP. Wells shows:

- A flag field that specifies direction of message flow:
  Wells, page 10 (see full quote above)
- A connection handle field that specifies handle of a backbone connection; and
  Wells, page 11 (see full quote above)
- An owner specific field that stores an owner specific header:
  Wells, page 70 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a flag field, connection

handle field, and an owner specified field, such as taught by Wells, in order to provide data link switching over the TCP/IP network.

In referring to claim 27, although Green shows substantial features of the claimed invention, including the system of claim 26 (see 102 rejection above), Green does not show a flag field, connection handle field, and an owner specified field. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Green as evidenced by Wells.

In analogous art, Wells discloses data link switching over TCP/IP. Wells shows:

- A flag field that specifies direction of message flow:
  Wells, page 10 (see full quote above)
- A connection handle field that specifies handle of a backbone connection; and
  Wells, page 11 (see full quote above)
- An owner specific field that stores an owner specific header:
  Wells, page 70 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a flag field, connection handle field, and an owner specified field, such as taught by Wells, in order to provide data link switching over the TCP/IP network.

In referring to claim 30, although Green shows substantial features of the claimed invention, including the system of claim 29 (see 102 rejection above), Green does not show a flag field, connection handle field, and an owner specified field. Nonetheless this feature is well known in the art and would have been an obvious modification to the system disclosed by Green as evidenced by Wells.

In analogous art, Wells discloses data link switching over TCP/IP. Wells shows:

- A flag field that specifies direction of message flow:
  Wells, page 10 (see full quote above)
- A connection handle field that specifies handle of a backbone connection; and

Wells, page 11 (see full quote above)

- An owner specific field that stores an owner specific header:

  Wells, page 70 (see full quote above)

Given these teachings, a person of ordinary skill in the art would have readily recognized the desirability and advantages of modifying the system of Green so as to use a flag field, connection handle field, and an owner specified field, such as taught by Wells, in order to provide data link switching over the TCP/IP network.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott M. Klinger whose telephone number is (703) 305-8285. The examiner can normally be reached on M-F 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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FRANTZ B. JEAN
PRIMARY EXAMINER